

CLAIMS:

1. A DNA encoding a protein comprising the amino acid sequence selected from the group consisting of: a) the amino acid sequence of the insecticidal trypsin-digestion fragment of the protein encoded by the *cry1Bf* gene deposited at the BCCM-LMBP under accession number LMBP 3986, b) the amino acid sequence of the insecticidal trypsin-digestion fragment of the protein encoded by the *cry1Jd* gene deposited at the BCCM-LMBP under accession number LMBP 3983, and c) the amino acid sequence of the insecticidal trypsin-digestion fragment of the protein encoded by the *cry9Fa* gene deposited at the BCCM-LMBP under accession number LMBP 3984.
2. The DNA of claim 1, comprising the DNA sequence of SEQ ID No. 1, SEQ ID No. 3, or SEQ ID No. 5.
3. The DNA of claim 1, comprising an artificial DNA sequence having a different codon usage compared to the naturally occurring DNA sequence but encoding the same protein or its insecticidal fragment thereof.
4. A chimeric gene comprising the DNA of claim 1 under the control of a plant-expressible promoter.
5. A plant cell transformed to contain the chimeric gene of claim 4.
6. A plant or a seed, comprising the chimeric gene of claim 4 integrated in its cells.
7. A plant or seed according to claim 6, wherein the chimeric gene is integrated in the nuclear or chloroplast DNA of their cells.
8. The plant or seed of claim 6 which is selected from the group consisting of: corn, cotton, rice, oilseed rape, *Brassica* species, eggplant, soybean, potato, sunflower, tomato, sugarcane, tea, beans, tobacco, strawberry, clover, cucumber, watermelon, pepper, oat, barley, wheat, dahlia, gladiolus, chrysanthemum, sugarbeet, sorghum, alfalfa, and peanut.

9. A micro-organism, transformed to contain the DNA of claim 1.
10. The micro-organism of claim 9 which is selected from the genus Agrobacterium, Escherichia, or Bacillus.
11. A process for controlling insects, comprising expressing the DNA of claim 1 in a host cell, and contacting insects with said host cells.
12. A process for obtaining a plant with resistance to insects, comprising transforming plant cells with the DNA of claim 1, and regenerating transformed plants from such cells which are resistant to insects.
13. The process of claim 12; further comprising obtaining seed from said plants comprising said DNA.
14. A process for obtaining a plant with resistance to insects, comprising transforming plant cells with the chimeric gene of claim 4, and regenerating transformed plants from such cells which are resistant to insects.
15. The process of claim 14, further comprising obtaining seed from said plants comprising said DNA.
16. A DNA encoding a protein comprising the amino acid sequence selected from the group consisting of: the amino acid sequence of an insecticidal fragment of the protein of SEQ ID No. 2, the amino acid sequence of an insecticidal fragment of the protein of SEQ ID No. 4, and the amino acid sequence of an insecticidal fragment of the protein of SEQ ID No. 6.
17. The DNA of claim 16, encoding a protein comprising the amino acid sequence selected from: the amino acid sequence of SEQ ID No. 2 from amino acid position 1 to amino acid position 640, the amino acid sequence of SEQ ID No. 4 from amino acid position 1 to amino acid position 596, and the amino acid sequence of SEQ ID No. 6 from amino acid position 1 to amino acid position 652.

18. The DNA of claim 17, encoding a protein comprising the amino acid sequence of the group selected from: the amino acid sequence of SEQ ID No. 2, the amino acid sequence of SEQ ID No. 4, the amino acid sequence of SEQ ID No. 6.

19. The DNA of claim 16, comprising the DNA sequence of SEQ ID No. 1, SEQ ID No. 3, or SEQ ID No. 5.

20. The DNA of claim 19, comprising an artificial DNA sequence having a different codon usage compared to the naturally occurring DNA sequence but encoding the same protein or its insecticidal fragment.

21. The DNA of claim 16, comprising an artificial DNA sequence having a different codon usage compared to the naturally occurring DNA sequence but encoding the same protein or its insecticidal fragment thereof.

22. A chimeric gene comprising the DNA of claim 16 under the control of a plant-expressible promoter.

23. A plant cell transformed to contain the chimeric gene of claim 22.

24. A plant or a seed, comprising the chimeric gene of claim 22 integrated in its cells.

25. A plant or seed, comprising the chimeric gene of claim 22 integrated in the nuclear or chloroplast DNA of their cells.

26. The plant or seed of claim 24 which is selected from the group consisting of: corn, cotton, rice, oilseed rape, Brassica species, eggplant, soybean, potato, sunflower, tomato, sugarcane, tea, beans, tobacco, strawberry, clover, cucumber, watermelon, pepper, oat, barley, wheat, dahlia, gladiolus, chrysanthemum, sugarbeet, sorghum, alfalfa, and peanut.

27. A micro-organism, transformed to contain the DNA of claim 16.

28. The micro-organism of claim 27 which is selected from the genus *Agrobacterium*, *Escherichia*, or *Bacillus*.
29. A process for controlling insects, comprising expressing the DNA of claim 16 in a host cell, and contacting insects with said host cells.
30. A process for obtaining a plant with resistance to insects, comprising transforming plant cells with the DNA of claim 16, and regenerating transformed plants from such cells which are resistant to insects.
31. The process of claim 30, further comprising obtaining seed from said plants comprising said DNA.
32. A process for obtaining a plant with resistance to insects, comprising transforming plant cells with the chimeric gene of claim 22, and regenerating transformed plants from such cells which are resistant to insects.
33. The process of claim 32, further comprising obtaining seed from said plants comprising said DNA.
34. A protein comprising the amino acid sequence selected from the group consisting of: a) the amino acid sequence of the insecticidal trypsin-digestion fragment of the protein encoded by the *cry1Bf* gene deposited at the BCCM-LMBP under accession number LMBP 3986, b) the amino acid sequence of the insecticidal trypsin-digestion fragment of the protein encoded by the *cry1Jd* gene deposited at the BCCM-LMBP under accession number LMBP 3983, c) the amino acid sequence of the insecticidal trypsin-digestion fragment of the protein encoded by the *cry9Fa* gene deposited at the BCCM-LMBP under accession number LMBP 3984.
35. The protein of claim 34, comprising the amino acid sequence of SEQ ID No. 2, SEQ ID No. 4, or SEQ ID No. 6.

36. A method for protecting a plant from insects, comprising growing a plant in a field, wherein said plant produces an insecticidal amount of a protein according to claim 34.
37. The method according to claim 36, wherein said cells comprise a DNA molecule which comprises a promoter operably linked to a DNA encoding said protein.
38. A protein comprising the amino acid sequence selected from the group consisting of: the amino acid sequence of an insecticidal fragment of the protein of SEQ ID No. 2, the amino acid sequence of an insecticidal fragment of the protein of SEQ ID No. 4, and the amino acid sequence of an insecticidal fragment of the protein of SEQ ID No. 6.
39. The protein of claim 38, comprising the amino acid sequence selected from the group consisting of: the amino acid sequence of SEQ ID No. 2 from amino acid position 1 to amino acid position 640, the amino acid sequence of SEQ ID No. 4 from amino acid position 1 to amino acid position 596, and the amino acid sequence of SEQ ID No. 6 from amino acid position 1 to amino acid position 652.
40. The protein of claim 39, comprising the amino acid sequence of SEQ ID No. 2, SEQ ID No. 4, or SEQ ID No. 6.
41. A method for protecting a plant from insects, comprising growing a plant in a field, wherein said plant produces an insecticidal amount of a protein according to claim 38.
42. The method according to claim 41, wherein said cells comprise a DNA molecule which comprises a promoter operably linked to a DNA encoding said protein.